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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/767,617      | 01/29/2004  | Chen-Hsiung Cheng    | 9432-000158/DVC     | 5655             |

27572 7590 08/30/2006

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|          |
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| EXAMINER |
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ABOAGYE, MICHAEL

|          |              |
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| ART UNIT | PAPER NUMBER |
|----------|--------------|

1725

DATE MAILED: 08/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                               |                              |  |
|------------------------------|-------------------------------|------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/767,617 | Applicant(s)<br>CHENG ET AL. |  |
|                              | Examiner<br>Michael Aboagye   | Art Unit<br>1725             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 20-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>03/03/06 &amp; 01/29/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 20-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Aoki et al. (US Patent NO. 5,237,148).

Aoki et al teaches a laser-milled workpiece comprising a workpiece layer or ink-jet nozzle plate having an aperture or ink-jet nozzle formed therein by laser ablation of workpiece material; wherein the laser ablation is performed by a laser drilling system driving a laser beam according to a tool path across a surface of said workpiece layer, wherein the tool path has a constant arc speed (column 2, lines 45-50); wherein said nozzle plate forms part of an ink-jet head utilized in an ink-jet printer device (see abstract, column 1, lines 5-50; column 2, lines 11-61 and figures).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Temple et al. (US Patent No. 6,228,311) in view of Zanomi (US Patent No. 3,961,838).

Temple et al. discloses a laser-milled workpiece comprising: a workpiece layer or ink-jet nozzle plate having an aperture or ink-jet nozzle formed therein by laser ablation of workpiece material, wherein the laser ablation is performed by a laser drilling system driving a laser beam according to a tool path across a surface of said workpiece layer; wherein said nozzle plate forms part of an ink-jet head utilized in an ink-jet printer device (see abstract, column 2, line 1- column 3, line 64; and figures).

Temple et al teaches substantially the elements of claim 1, but do not teach wherein the tool path has a constant arc speed.

However Zanomi teaches a system for producing and scanning laser beam, said system having a rotating mirror or a reflecting polygon arranged in the optical path and rotated uniformly by an electromagnetic transducer "6" to produce a laser beam of constant or uniform angular velocity which has broader utility in optical devices (column 2, lines 26-54; column 3, line 10- column 4, line 44 and figures 4 and 6).

It would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to have arranged a rotating mirror or a reflecting polygon in the optical path of the system of Temple et al. as taught by Zanomi in order to produce a laser beam of constant or uniform angular velocity which has broader utility in optical devices (see, Zanomi: column 2, lines 26- 32).

6. Claims 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Temple et al. (US Patent No. 6,228,311) in view of Yamakawa (US Patent No. 5,682,258).

Temple et al teaches substantially the elements of claim 1 as above, but do not teach wherein the tool path has a constant arc speed.

However Yamakawa discloses an optical scanning system comprising F-Theta lens element arranged in the optical path and scanning the laser beam to a constant speed; said system not only small in size, but also providing well corrected curvature and furthermore lending it self to a broader applicability and utility in the field of laser printing platemaking (see Yamakawa: column 1, line 9 – column 2, line 22, and column 2, line 58 – column 3, line 67 and figure 1-4 and 8)

It would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to have employed a F-theta lens element in the optical system of Temple et al. as taught by Yamakawa in order to gain the benefit of having a laser scanning system of smaller size and well corrected curvature necessary for application in the field of laser printing platemaking (see Yamakawa: column 1, line 9 – 13).

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**Conclusion**

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shim (US 6,526,074) and Omaru et al. (US 5,095,383) are also cited in PTO-892.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Aboagye whose telephone number is 571-272-8165. The examiner can normally be reached on Mon - Fri 8:30am - 5pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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KEVIN KERNS  
PRIMARY EXAMINER

Kevin Kerns 8/29/06

  
Michael Aboagye  
Assistant examiner  
Art unit 1725

08/23/2006